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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/666,184
Filing Date: September 17, 2003
Appellant(s): KLEIN, DEAN A.

John R. King
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 01/05/2010 appealing from the Office action mailed 05/27/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,288,749	Freadman	9-2001
6,195,530	Smith et al.	2-2001
6,009,465	Decker et al.	12-1999

5,742,713	Sanders et al.	4-1998
5,760,822	Coutinho	6-1998
6,738,978	Hendricks et al.	5-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)**, herein Smith, in view of **Decker et al. (US Patent 6,009,465)**, herein Decker, further in view of **Sanders et al. (US Patent 5,742,713)**, herein Sanders.

Consider **claim 1**, Freadman clearly teaches a network bus comprising:

> a notch filter coupled to a cable, **(Fig. 1: Signal converted 20 contains a notch filter, column 3 lines 52-62.)** said cable routed in a tree configuration to a plurality of locations of a building, **(Fig. 1: The plurality of locations in Fig. 1 are in a tree configuration and the locations are in the same building, column 3 lines 63-67.)** said notch filter comprising a first port in communication with an external source, said notch filter configured to filter out a portion of video signals carried by said cable; **(column 3 lines 52-62)**

Freadman further teaches a second port on said notch filter **(Output 11 from computer 10 is input to the filter, col. 3 lines 36-48.)**, modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However,

Freadman does not explicitly teach a frequency converter, coupled to coaxial cable, configured to receive signals from said tree configuration at a first frequency and to forward said signals within said tree configuration at a second frequency, wherein said first and second frequencies are within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration using coaxial cable **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a frequency converter receiving signals from the tree configuration at a first frequency, converting the signals to a second frequency and transmitting the signals back to the tree configuration, wherein the first and second frequencies are within the filtered out portion. **(Fig. 1: Addressable transmitter/receiver 10 receives signals from the terminals 7, 8 or 9 over link 6 at a first frequency and transmits data to the terminals over the link 6 at a separate frequency, column 4 lines 36-57.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

However, Freadman and Smith do not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the local area network computer signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman, Smith and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman, Smith and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 2**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said frequency converter is configured to forward said signals via said coaxial cable. **(Fig. 1 transmission link 6, column 3 lines 46-50 Smith)**

Consider **claim 3**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 4**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said video signals are delivered to said coaxial cable from a headend equipment of a community antenna television system. **(column 3 lines 23-25 Freadman)**

Consider **claim 5**, Freadman combined with Smith, Decker and Sanders, as in claim 1, clearly teaches said filtered out portion comprises a frequency range from approximately 50MHz to approximately 750MHz. **(The notch filter filters out a television channel, column 3 lines 52-62 Freadman.)**

3. Claims **6-9 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 6**, Freadman clearly teaches a local area computer network comprising:

> a notch filter comprising a first port configured to receive a signal from a cable television transmission system **(column 3 lines 23-25 Freadman)** and to filter out at least one portion of said signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**

a community antenna television wire configured to receive said filtered signal and routed in a tree configuration to a plurality of locations of a residence, said wire in communication with a second port **(Output 11 from computer 10 is input to the filter, col. 3 lines 36-48.)** of said notch filter; **(Fig. 1: The plurality of locations in Fig. 1 are in a tree configuration and the locations are in the same building, column 3 lines 63-67.)**

Freadman further teaches modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However, Freadman does not explicitly teach a plurality of computers coupled to said wire, each of said computers having a modem configured to receive and transmit broadband signals between said computers within said tree configuration; wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier having a frequency within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a plurality of computers coupled to the wire each having a modem for transmission of broadband signals between the computers over the tree configuration, wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier. **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using modems within a group of computers for modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Smith do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local

network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 7**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches the computers are configured to send said upstream signals to said cable television transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz. **(column 4 lines 16-50 Sanders)**

Consider **claim 8**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches said modems are configured to receive a signal at a first frequency and to transmit said signal at a second frequency, **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34 Smith.)** wherein said first and second frequencies are within said filtered out portion. **(Data communication takes place in the filtered portion of the spectrum, column 3 lines 36-62 Freadman.)**

Consider **claim 9**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches a frequency converter configured to convert signals from said first frequency to said second frequency. **(Fig. 1: Addressable transmitter/receiver 10 receives signals from the terminals 7, 8 or 9 over link 6 at a first frequency and transmits data to the terminals over the link 6 at a separate frequency, column 4 lines 36-57 Smith.)**

Consider **claim 12**, Freadman combined with Smith and Sanders, as in claim 6, clearly teaches at least one of said computers is configured to receive signals from said transmission system using a carrier frequency in the range of approximately 0 MHz to approximately 50 MHz. **(column 4 lines 43-50 Sanders)**

4. Claims **13-33 and 42-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Decker et al. (US Patent 6,009,465)** further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 13**, Freadman clearly teaches a local area network comprising:

> routing community antenna television wiring in a tree configuration to different parts of a structure; **(Fig. 1: Data from broadcast source 100 is routed in a tree configuration to televisions 30 located within a structure, column 3 lines 23-25; lines 62-67.)**
>
> coupling a notch filter comprising a first port to said wiring for filtering out one or more bands of frequencies associated with one or more television broadcasts delivered to said wiring by a service drop of a community antenna television distribution system; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**

Freadman further teaches a second port of the notch filter coupled to computing devices **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)** and messages may be transmitted between the television sets in the filtered frequencies. **(column 4 lines 28-30)** To accomplish this data must be modulated and demodulated by the television sets.

However, Freadman does not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 14**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches each of at least some of said computing devices comprises a receiver configured to receive video signals from said headend transmission equipment, **(column 3 lines 23-25)** and a modem configured to receive and transmit broadband signals between said computing devices. **(column 4 lines 28-30)**

Sanders further teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 15**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches computing devices comprise a computer and a microprocessor controlled appliance. **(column 12 lines 16-23 Decker)**

Consider **claim 16**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said computing devices comprise an alarm system. **(Any device capable of transmitting sensory data may be used, column 12 lines 16-19 Decker.)**

Consider **claim 17**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said filtered out television broadcasts comprise a portion of the frequency range between approximately 50 MHz to 750 MHz. **(Television channels are located in the range of 50-750 MHz.)**

Consider **claims 18/14, 18/15, 18/16, 18/17**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 19**, Freadman combined with Decker and Sanders, as in claim 13, clearly teaches at least some of said computing devices transmit communications at a first frequency and receive communications at a second frequency, wherein said first and second frequency are within said filtered out

television broadcasts. **(Television sets 30 receive signals modulated at a television channel frequency and may communicate with each other, column 4 lines 22-30 Freadman.)**

Consider **claim 20**, Freadman clearly teaches a local area network comprising:

> coupling a notch filter comprising a first port to wiring carrying television signals, wherein the coaxial wiring is routed in a tree configuration to a plurality of locations in a building; **(Fig. 1: Data from broadcast source 100 is sent to Signal converted 20, which contains a notch filter, then routed in a tree configuration to televisions 30 located within a structure, column 3 lines 23-25; lines 62-67.)**
>
> filtering out a frequency band comprising a portion of said television signals with the notch filter; **(column 3 lines 52-62)**
>
> establishing two-way communications between at least two computing devices within the building and connected via the tree configuration, wherein said two-way communications are coupled to the second port of said notch filter **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)**, wherein said communications are carried at least in part over said wiring utilizing said filtered out frequency band. **(column 4 lines 28-30)**

However, Freadman does not explicitly teach said cable is a coaxial cable.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches the use of coaxial cable to transmit data. **(column 5 lines 1-2)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using coaxial cable, as taught by Decker, because both references teach methods of distributing data in a network it would have been obvious to substitute one cable type for another to achieve the predictable result of transmitting data.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claims 21 and 22**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said building comprises a residential building and said residential building comprises a plurality of rooms of a residence.. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 23**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said television signals are delivered to said building via a service drop of a community antenna television system. **(column 3 lines 23-25 Freadman)**

Consider **claim 24**, see claim 17.

Consider **claim 25**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches blocking at least some of said communications from being transmitted outside said local area network via said service drop. **(Fig. 1: Signal converter 20 contains a comb filter 61 Freadman.)**

Consider **claim 26**, see claim 19.

Consider **claim 27**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches providing a frequency converter configured to receive said communications at said first frequency and to forward said communications at said second frequency. **(Fig. 1: Signal converter 20 converts signals from one frequency to another frequency, column 3 lines 37-41 Freadman.)**

Consider **claim 28**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches one of the computing devices sends a communication to another of the computing devices at a first frequency, and wherein said another computing device receives said communication at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-36 Freadman.)**

Consider **claim 29**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches the method of claim 23.

Decker further teaches said computing devices comprise a network computer. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Consider **claim 30**, see claim 29.

Consider **claim 31**, see claim 16.

Consider **claim 32**, see claim 29.

Consider **claim 33**, see claims 30-32.

Consider **claim 42**, Freadman clearly teaches a local area network comprising:

> receiving a television signal from a headend transmission equipment of a cable television transmission system; **(Fig. 1: Data from broadcast source 100 is routed to televisions 30, column 3 lines 23-25.)**
>
> filtering out with a notch filter connected via first port to said television signal to filter a portion of said television signal in the range of approximately 50 MHz to approximately 750 MHz to produce a filtered signal; **(Fig. 1: Signal converted 20 contains a notch filter, which filters out a television channel, column 3 lines 52-62.)**
>
> coupling said filtered signal to unlooped cable television wiring that is in communication with a second port of said notch filter; **(Fig. 1: Data from broadcast source 100 is routed in a tree configuration to televisions 30, column 3 lines 23-25. Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)**

Freadman further teaches messages may be transmitted between the television sets in the filtered frequencies. **(column 4 lines 28-30)** To accomplish this data must be modulated and demodulated by the television sets.

However, Freadman does not explicitly teach a plurality of computers coupled to said wire.

In an analogous art, Decker, which discloses a system for a local area network wherein filtered signals are displayed on a television set, clearly teaches a plurality of computers coupled to said wire. **(column 12 lines 16-19 Decker)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by utilizing a plurality of computers coupled to said wire, as taught by Decker, for the benefit of providing the user with added interactive functionality.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman and Decker do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 43**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches each of at least some of said computing devices comprises a receiver configured to receive video signals from said headend transmission equipment, **(column 3 lines 23-25)**

Sanders further teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 44**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches personal computers sending signals over a network.

Sanders further teaches using a carrier frequency in the range of 0-50 MHz. **(column 4 lines 16-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by communicating an upstream message using a carrier frequency in the range of 0-50 MHz, as taught by Sanders, for the benefit of providing a means for the user to communicate with the headend.

Consider **claim 45**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said building comprises a residential building. **(Any type of building may be used, column 3 lines 63-67 Freadman.)**

Consider **claim 46**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches a local area network.

Decker further teaches the use of coaxial cable to transmit data. **(column 5 lines 1-2)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using coaxial cable, as taught by Decker, because both references teach methods of distributing data in a network it would have been obvious to substitute one cable type for another to achieve the predictable result of transmitting data.

Consider **claim 47**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said computing devices comprise a network computer. **(column 12 lines 16-19 Decker)**

Consider **claim 48**, Freadman combined with Decker and Sanders, as in claim 20, clearly teaches said modem in configured to receive communications at a first frequency and to send communications at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-30 Freadman.)**

Consider **claim 49**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches coupling a frequency converter to said wiring, wherein said frequency converter receives a communication at a first frequency and forwards said communication at a second frequency. **(Fig. 1: Signal converter 20 converts signals from one frequency to another frequency, column 3 lines 37-41 Freadman.)**

Consider **claim 50**, Freadman combined with Decker and Sanders, as in claim 42, clearly teaches said computing devices comprise a personal computer. **(column 12 lines 16-19 Decker)**

Consider **claim 51**, see claim 50.

5. Claims **34, 35 and 38-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Coutinho (US Patent 5,760,822)** and further in view of **Sanders et al. (US Patent 5,742,713)**.

Consider **claim 34**, Freadman clearly teaches a network device comprising:

a receiver for receiving a television signal from a community antenna television system; **(column 3 lines 23-25)**

a notch filter in communication with said television signal via a first port, said notch filter configured to block at least one stop frequency band within the received television signal; **(column 3 lines 49-62)**

Freadman further teaches a second port of the notch filter coupled to computing devices **(Outputs 11 from computers 10 are input to the filter, col. 3 lines 36-48.)** and modulating data to the notched frequency for distribution over the network **(column 3 lines 36-48)** and communication between the network devices **(column 4 lines 22-30)**. However, Freadman does not explicitly teach a modem configured to receive and transmit broadband signals between said computers within said tree configuration; wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier having a frequency within said filtered out portion.

In an analogous art, Smith, which discloses a local video distribution network, clearly teaches the network comprises a tree configuration **(Fig. 1 transmission link 6, column 3 lines 46-50)**, a plurality of computers coupled to the wire each having a modem for transmission of broadband signals between the computers over the tree configuration, wherein said computers are configured to send and receive communications between different ones of said computers via said modems by modulating a carrier. **(Fig. 2: Each of the terminals 7, 8 or 9 contains up/down converter 201, demodulator 202 and data receiver 203 for demodulating data received from the network and modulating data to be transmitted via the network, column 5 lines 13-34.)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman by using modems within a group of computers for modulating upstream and downstream communications in separate frequencies, as taught by Smith, for the benefit of eliminating the upstream RF link of Freadman.

However, Freadman and Smith do not explicitly teach a transmitter for forwarding signals to said headend transmission equipment.

In an analogous art, Coutinho, which discloses a system for transmitting data to a local in-building network, clearly teaches a transmitter for forwarding signals to said headend transmission equipment. **(column 5 lines 23-50)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Smith by communicating an upstream message, as taught by Coutinho, for the benefit of providing a means for the user to communicate with the headend.

Freadman further teaches receiving and filtering the signals being exchanged in the filtered out portion of the video signal so as to prevent the signals from being transmitted back to the broadcast source **(column 3 lines 49-62)**. However, Freadman, Smith and Coutinho do not explicitly teach using said notch filter to prevent the transmissions from the local area network of computers from being sent to the external source.

In an analogous art, Sanders, which discloses a bidirectional cable system, clearly teaches using a notch filter to prevent the transmissions from the local network from being sent to the external source. **(column 4 line 57 to column 5 line 67)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman and Decker by preventing upstream ingress noise using the notch filter, as taught by Sanders, for the benefit of further reducing noise on the upstream channel without use of an additional filter.

Consider **claim 35**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches said modem is configured to receive signals at a first frequency and to transmit said signals at a second frequency. **(Computing devices receive data on a channel frequency and transmit data via a separate frequency, column 4 lines 22-30 Freadman.)**

Consider **claim 38**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly said receiver is configured to receive signals in the range of approximately 50 to 750 MHz. **(Television channels are located in the range of 50-750 MHz.)**

Consider **claim 39**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches said network device comprises a microprocessor controlled appliance. **(Fig. 2 Processor 206, column 5 lines 35-42 Smith)**

Consider **claim 40**, see claim 39.

Consider **claim 41**, see claim 39.

6. Claims **10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Sanders et al. (US Patent 5,742,713)**, as applied to claim 9 above, and further in view of **Hendricks et al. (US Patent 6,738,978)**, herein Hendricks.

Consider **claims 10**, Freadman combined with Smith and Sanders, as in claim 9, clearly teaches a local area network.

However, Freadman combined with Smith and Sanders do not explicitly teach at least some of said computers are configured to receive digital data from the Internet via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive digital data from the Internet via said wire. **(column 49 lines 57-62)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith and Sanders by allowing at least some of said computers are configured to receive digital data from the Internet via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

Consider **claims 11**, Freadman combined with Smith and Sanders, as in claim 9 above, clearly teaches a local area network.

However, Freadman combined with Smith and Sanders do not explicitly teach at least some of said computers are configured to receive FM audio signals via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive FM audio signals via said wire. **(column 26 lines 37-39)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith and Sanders by allowing at least some of said computers are configured to receive FM audio signals via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

7. Claims **36 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Freadman (US Patent 6,288,749)** in view of **Smith et al. (US Patent 6,195,530)** further in view of **Coutinho (US Patent 5,760,822)** and further in view of **Sanders et al. (US Patent 5,742,713)**, as applied to claim 34 above, and further in view of **Hendricks et al. (US Patent 6,738,978)**.

Consider **claim 36**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches a local area network.

However, Freadman combined with Smith, Coutinho and Sanders do not explicitly teach at least some of said computers are configured to receive digital data from the Internet via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive digital data from the Internet via said wire. **(column 49 lines 57-62)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith, Coutinho and Sanders by allowing at least some of said computers are configured to receive digital data from the Internet via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

Consider **claim 37**, Freadman combined with Smith, Coutinho and Sanders, as in claim 34, clearly teaches a local area network.

However, Freadman combined with Smith, Coutinho and Sanders do not explicitly teach at least some of said computers are configured to receive FM audio signals via said wire.

In an analogous art Hendricks, which discloses a system for distributing television data, clearly teaches at least some of said computers are configured to receive FM audio signals via said wire. **(column 26 lines 37-39)**

Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to modify the system of Freadman combined with Smith, Coutinho and Sanders by allowing at least some of said computers are configured to receive FM audio signals via said wire, as taught by Hendricks, for the benefit of providing diverse entertainment sources.

(10) Response to Argument

1. In response to appellant's argument (Appeal Brief section A2a) that the cited art does not disclose a local area network (LAN) of computers that send and receive data within the bands of the filtered video signals, the examiner respectfully disagrees. Figure 2 of Freadman shows a notch filter 62 attenuating selected video signals (col. 3 lines 52-62). Data is then transmitted over theses attenuated frequencies between computer 10 and televisions 30 (col. 3 lines 36-48 and col. 4 lines 22-30). Messages are sent from televisions 30 to computer 10 then back from computer 10 to televisions 30 (col. 4 lines 22-30). These messages are carried over link 51 (col. 4 lines 31-36) which is part of the local network and not a separate radio frequency (RF) link as stated by appellant.

2. In response to appellant's argument (Appeal Brief section A2b) that the cited art does not disclose a frequency converter that transmits signals in a filtered band, the examiner respectfully disagrees. As discussed in section 1 above Freadman shows

bidirectional LAN communication in the filtered bands. Smith further shows a frequency converter sending and receiving LAN signals at different frequencies as noted by appellant on page 20 paragraph 3 of the Appeal Brief. Therefore, the combination shows a frequency converter in a LAN sending and receiving signals at different frequencies within a filtered band of frequencies.

3. In response to appellant's argument (Appeal Brief section A2c) that the cited art does not disclose a notch filter filtering both incoming and outgoing signals, the examiner respectfully disagrees. Freadman shows a notch filter filtering incoming signals and filtering outgoing signals with a separate filter (col. 3 lines 49-62). Sanders teach filtering outgoing signals with a notch filter (col. 4 line 57 to col. 5 line 67).

4. In response to appellant's argument (Appeal Brief section A2d) that the cited art does not disclose a notch filter that allows transmission of LAN signals, the examiner respectfully disagrees. As shown in section 1 above Freadman discloses a LAN in which a notch filter attenuates a frequency band and allows bidirectional LAN communication over this band. The combination of Freadman and Sanders discussed in section 3 above shows the notch filter filtering outgoing LAN signals.

5. In response to appellant's argument (Appeal Brief section A3) that the examiner has not presented a proper prima facie case of obviousness because not all of the claim limitations are met, the examiner respectfully disagrees. The prior art teaches a LAN sending and receiving data within filtered bands as discussed in section 1 above. The prior art teaches a frequency converter as discussed in section 2 above. The prior art teaches a notch filter attenuating both incoming and outgoing signals as discussed in

section 3 above. The prior art teaches a notch filter allowing transmission of LAN signals as discussed in section 4 above.

6. In response to appellant's argument (Appeal Brief section B1a) that the cited art does not disclose a local area network (LAN) of computers that send and receive data within the bands of the filtered video signals, see section 1 above.

7. In response to appellant's argument (Appeal Brief section B1b) that the cited art does not disclose a notch filter filtering both incoming and outgoing signals, see section 3 above.

8. In response to appellant's argument (Appeal Brief section B1c) that the cited art does not disclose a notch filter that allows transmission of LAN signals, see section 4 above.

9. In response to appellant's argument (Appeal Brief section B2) that the examiner has not presented a proper prima facie case of obviousness because not all of the claim limitations are met, see section 5 above.

10. In response to appellant's argument (Appeal Brief section C1a) that the cited art does not disclose a local area network (LAN) of computers that send and receive data within the bands of the filtered video signals, see section 1 above.

11. In response to appellant's argument (Appeal Brief section C1b) that the cited art does not disclose a notch filter filtering both incoming and outgoing signals, see section 3 above.

12. In response to appellant's argument (Appeal Brief section C1c) that the cited art does not disclose a notch filter that allows transmission of LAN signals, see section 4 above.

13. In response to appellant's argument (Appeal Brief section C2) that the examiner has not presented a proper prima facie case of obviousness because not all of the claim limitations are met, see section 5 above.

14. In response to appellant's arguments against the depend claims, the examiner notes that the cited art discloses each of the limitations of the independent claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/John Schnurr/

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/John W. Miller/

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